DOCUMENT RESUME

ED 246 848 IR 011 177

TITLE Microcomputer Usage in Schools, 1983-84.
INSTITUTION Quality Education Data, Inc., Denver, CO.
PUB DATE 84
NOTE 18p.; The survey shown in this booklet represents the Third Annual Presentation of Quality Education Data, Inc. (QED) data to the Materials Council of the National AudioVisual Association. For related document, see ED 226 717.
PUB TYPE Statistical Data (110)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Computer Assisted Instruction; Elementary Secondary Education; Enrollment; Expenditure per Student; *Microcomputers; National Surveys; *Public Schools; School Demography; *School Districts; Tables (Data); *Use Studies
IDENTIFIERS *United States

ABSTRACT

Results are presented for the third annual survey of all United States school districts by Quality Education Data, Inc. Findings are displayed in tabular form, and include information on the following: size of the microcomputer marketplace and the kinds of people involved; availability of software by brand for home, business, and education use; the best home education software sellers; availability of software by brand for educational use; growth patterns; microcomputer use by brand name; hardware manufacturer market penetration; shifts in the use of different brands of microcomputers; the kinds of districts that have microcomputers; the relationship of the relative wealth/poverty of the community to microcomputers; the relationship of instructional dollars per pupil to the presence of microcomputers; the kinds of schools using microcomputers; the relationship of the percentage of minority students to the presence of microcomputers; the validity of enrollment or expenditure as a predictor of presence of microcomputers; computer owners more likely to purchase software; the number of microcomputers by brand in schools; the number of schools having enough microcomputers to support networking; a "profile" of microcomputers used in the top 50 districts; how states compare in the number of students per microcomputer(s); projected spending of Chapter 2 Federal Funds in the 1983-1984 school year; use of video for instruction in schools; and video users by format and grade span. (LMM)

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ED246848

1983-84 MICROCOMPUTER USAGE IN SCHOOLS

QUALITY EDUCATION DATA, INC.

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MEANS EDUCATIONAL LIST

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QED
MEANS QUALITY INFORMATION

Spring 1984

Dear Reader of QED's Microcomputer Usage In Schools:

Thank you for your interest in our original research.

This is the third annual survey of all U.S. School Districts in which Quality Education Data, Inc. gathered data about microcomputer usage as well as a large number of other items.

The first QED survey, conducted in the Spring of 1981, was the very first census of this market ever. From the first survey through the most recent survey, QED has surveyed usage of microcomputers by brand for all school buildings as well as school districts.

QED has conducted this survey each year in order to obtain comparable numbers and give you solid trending information on which to base your marketing or research planning.

You may also be interested in QED's research on the use of Video in Schools. The last two charts in the enclosed report summarize the findings of QED's research for the last two years in this fast-growing area.

QED's data is available in detailed form in both the School Territory Guides, state-by-state directories, and the QED Data Base of Mailing Lists.

Do call Toll-Free if you have questions with which QED can help.

Sincerely,

Jeanne Hayes

Jeanne Hayes
President
QUALITY EDUCATION DATA, INC.

P.S. The survey shown in this booklet represents the Third Annual Presentation of QED's data to the Materials Council of the National AudioVisual Association.

JH:mac

HOW BIG IS THE MICROCOMPUTER MARKETPLACE; WHAT KINDS OF PEOPLE ARE INVOLVED?

IN THE THREE MARKETS OF EDUCATION, HOME, AND BUSINESS APPLICATIONS THE NUMBERS ARE:

1.	SOFTWARE PUBLISHERS	1,947
2.	DISTRIBUTORS	153
3.	HARDWARE MANUFACTURERS/SYSTEMS	206
4.	PERIPHERAL MANUFACTURERS (PRINTERS, DISK DRIVES, ETC.)	496
5.	SUPPLY MANUFACTURERS (PAPER, FORMS, TABLES, ETC.)	149
6.	PERIODICALS (NEWSLETTERS, MAGAZINES, ETC.)	256
7.	ASSOCIATIONS	41
8.	ON LINE DATA BASE SERVICES	36
9.	SPECIAL SERVICE COMPANIES (CONSULTANTS, MARKET RESEARCH, ETC.)	285
10.	MEETINGS AND EXHIBITS (PER YEAR)	292

SOURCE: MICROCOMPUTER MARKETPLACE DIRECTORY, 1983-84 EDITION
PUBLISHED BY DEKOTEK, INC. 2248 BROADWAY, NEW YORK, NEW YORK, 10024
SPRING 1983 SURVEY

1

HOW AVAILABLE IS SOFTWARE BY BRAND FOR HOME, BUSINESS, AND EDUCATION USE?

BRAND OF MICRO	NUMBER OF PUBLISHERS	RANK
IBM	884	1
APPLE	800	2
RADIO SHACK	675	3
COMMODORE	295	4
TEXAS INSTRUMENTS	228	5
ATARI	186	6

SOURCE: MICROCOMPUTER MARKETPLACE DIRECTORY 1983-84 EDITION
PUBLISHED BY DEKOTEK, INC. 2248 BROADWAY, NEW YORK, NEW YORK 10024
SPRING 1983 SURVEY WITH ALL COMPANIES REPORTING LISTED IN DIRECTORY

2

HOW MANY PUBLISHERS ARE PRODUCING SOFTWARE FOR THE HOME?

SOFTWARE PRODUCERS BY CATEGORY

EDUCATION	ENTERTAINMENT	HOME MANAGEMENT PERSONAL PRODUCTIVITY	BOOKS	ACCESSORIES
140	125	105	21	13

SOFTWARE MERCHANDISING DIRECTORY DECEMBER 1983

SOFTWARE DISTRIBUTORS BY CATEGORY

OUT OF 46 DISTRIBUTORS CITED, 28 SPECIFICALLY LISTED EDUCATIONAL SOFTWARE AS ONE OF THEIR LINES.

THE ONLY CATEGORIES AS PROMINENTLY MENTIONED AS EDUCATIONAL SOFTWARE WERE WORD PROCESSING AND BUSINESS APPLICATIONS.

SOFTWARE MERCHANDISING DIRECTORY DECEMBER 1983

** ALMOST ALL OF THE SOFTWARE PUBLISHERS CITED WERE PUBLISHERS OF EDUCATIONAL SOFTWARE FOR DISTRIBUTION TO SCHOOLS AS WELL AS HOMES.

WHAT ARE THE BEST HOME EDUCATION SOFTWARE SELLERS?

(IN ALPHABETICAL ORDER)

BANK STREET WRITER	WORD PROCESSING	BRODERBUND
BUMBLE PLOT	LEARNING PROGRAM- NUMBER PAIR FREQUENCY THROUGH PLOTTING	THE LEARNING COMPANY
FACEMAKER	ELEMENTARY PROGRAMMING THROUGH GAMES	SPINNAKER
GERTRUDE'S PUZZLES	SHAPE/COLOR PATTERNS	THE LEARNING COMPANY
MASTER TYPE	TYPING SKILLS	SCARBOROUGH/LIGHTNING
SNOOPER TROOPS I	DETECTIVE-TYPE GAMES LIBRARY SKILLS MAPS, VOCAB	SPINNAKER
SNOOPER TROOPS II	REASONING INFO CLASSIFICATION NOTE TAKING	SPINNAKER
STORY MACHINE	LANGUAGE ARTS - WRITING SENTENCE, PARAGRAPHS	SPINNAKER
TYPE ATTACK	TYPING ARCADE APPROACH	SIRIUS
TYPING TUTOR II	TYPING MONITORS KEYBOARD	MICROSOFT

SOFTWARE MERCHANDISING DIRECTORY, DECEMBER 1983 EASTMAN PUBLISHING, ENCINO CALIF.

HOW AVAILABLE IS SOFTWARE BY BRAND FOR EDUCATIONAL USE? *

BRAND OF MICRO	NUMBER OF PUBLISHERS	NUMBER OF PROGRAMS	PROGRAMS/PUBLISHER
APPLE	120	800-900	7.1
ATARI	30-40	250-300	7.9
COMMODORE PET	60-75	900-1,000	14.1
COMMODRE VIC 20	20-30	400-500	18.0
COMMODORE 64	25-30	1,000	36.4
IBM PC	35-40	350-400	10.0
TEXAS INSTRUMENTS	25-40	400-500	13.9
TRS 80 MODELS I AND III	150-180	900-1,000	5.8
TRS 80 COLOR	25-30	150-200	6.4

* DATA PRESENTED BY LARUTH MORROW OF STELLAR SOLUTIONS IN RICHARDSON TEXAS TO NATIONAL INSTITUTE OF EDUCATION, SEPTEMBER 1983
PUBLISHED IN COMPUTER WISE, OCTOBER 1983, NATIONAL SCHOOL BOARDS ASSOCIATION

RADIO SHACK AND COMMODORE PET HAVE THE LARGEST NUMBER OF PROGRAMS, FOLLOWED CLOSELY BY APPLE.

FOR ITS RELATIVELY BRIEF LIST, IBM APPEARS TO HAVE A HEALTHY NUMBER OF PROGRAMS.

HOW DID QED OBTAIN ITS MICROCOMPUTER DATA?

- CALLED EVERY SCHOOL DISTRICT IN 1981-1982, 1982-1983, AND 1983-1984
- ASKED IF THE DISTRICT USED MICROCOMPUTERS FOR INSTRUCTION
- IF YES, ASKED IF APPLE, RADIO SHACK, COMMODORE, ATARI, TEXAS INSTRUMENTS, IBM, FRANKLIN, OR OTHER BRAND
- IF YES, ASKED NAME OF MICROCOMPUTER SUPERVISOR FOR DISTRICT
- ASKED WHICH SCHOOLS USED MICROCOMPUTERS FOR INSTRUCTION
- ASKED BRAND USED PER SCHOOL
  APPLE, RADIO SHACK, COMMODORE, ATARI, TEXAS INSTRUMENTS, FRANKLIN, IBM, OR OTHER BRAND
- ASKED NUMBER OF MICROS PER BRAND (1983-84 SCHOOL YEAR ONLY)

(INCLUDES ALL INTERMEDIATE UNITS AND SUBDISTRICTS OF LARGE SCHOOL DISTRICTS).

WHAT DATA HAS QED GATHERED THAT DEALS WITH THE USE OF MICROCOMPUTERS IN EDUCATION?

WHAT HASN'T QED GATHERED?

NOT DOLLARS SPENT PER SCHOOL ON HARDWARE OR SOFTWARE

INFORMATION ABOUT OTHER MARKETS THAN EL HI EDUCATION

WHAT HAS QED GATHERED?

*** NEW FOR 1983-84: NUMBER OF UNITS FOR EACH SCHOOL AND DISTRICT BY BRAND

- HARD DATA BASED ON TELEPHONE CALLS TO EVERY U.S. SCHOOL DISTRICT AND INTERMEDIATE UNIT
- WHICH SCHOOL DISTRICTS ARE USING MICROCOMPUTERS AND BRAND OR COMBINATION OF BRANDS
- NAMES OF MICRO SOFTWARE COORDINATORS
- WHICH SCHOOLS WITHIN THOSE DISTRICTS ARE USING MICROCOMPUTERS AND BRAND OR COMBINATION OF BRANDS
- NAMES OF MICRO SOFTWARE COORDINATORS AND/OR PRINCIPALS
- 16MM FILM COLLECTIONS
- VIDEO EQUIPMENT
- NUMBER OF STUDENTS/NUMBER OF TEACHERS
- CORRELATION BETWEEN MORE THAN 20 PIECES OF DATA AND PRESENCE OF MICROCOMPUTERS
- TRACKING OF SAME INFORMATION FOR 1981-82 AND 1982-83 SCHOOL YEARS FOR TRENDING INFORMATION

WHAT GROWTH PATTERNS ARE SHOWN BY QED'S MICRO DATA?

	1981-82	1982-83	1983-84	% INCREASE
DISTRICTS:				
NUMBER OF SCHOOL DISTRICTS WITH MICROCOMPUTERS	6,473	9,379	12,517	33.5%
NUMBER OF SCHOOL DISTRICTS WITHOUT MICROCOMPUTERS	10,459	7,132	4,111	
PERCENTAGE OF SCHOOL DISTRICTS WITH MICROCOMPUTERS	38.2	56.8	75.0	
SCHOOLS:				
NUMBER OF SCHOOLS WITH MICROCOMPUTERS	14,132	30,859	55,175	75.2%
NUMBER OF SCHOOLS NOT YET USING MICROCOMPUTERS, IN DISTRICTS WITH MICROCOMPUTERS	32,567	34,066	18,919	
NUMBER OF SCHOOLS NOT USING MICROCOMPUTERS, IN DISTRICTS NOT USING MICROCOMPUTERS	39,048	18,723	8,858	
	85,747	83,648	82,952	
MICROCOMPUTER SUPERVISORS:				
NAMES OF MICROCOMPUTER SUPERVISORS AT SCHOOL DISTRICT ADDRESS	6,600	10,765	11,361	5.4%

WHAT MICROCOMPUTER BRAND INFORMATION HAS QED GATHERED FOR 1983-84 SCHOOL YEAR?

BRAND	# OF SCHOOL DISTRICTS WITH MICROCOMPUTERS	PERCENTAGE	# OF SCHOOL BLDGS. WITH MICROCOMPUTERS	PERCENTAGE
APPLE	8,269	46.2	36,781	54.1
RADIO SHACK	4,392	24.6	14,113	20.8
COMMODORE	2,645	14.8	9,166	13.5
ATARI	587	3.3	2,216	3.3
TEXAS INSTRUMENTS	628	3.5	1,732	2.6
Y (BRAND UNKNOWN)	198	1.1	942	1.4
OTHERS (BRANDS OTHER THAN ABOVE)	428	2.4	876	1.3
IBM	441	2.5	1,244	1.8
FRANKLIN	305	1.7	943	1.4
TOTAL	17,893		68,013	
(UNDUPLICATED TOTALS)	(12,517)		(55,175)	

THE PREDOMINANT BRAND IN BOTH DISTRICTS AND BUILDINGS IS APPLE.

WHICH HARDWARE MANUFACTURER HAS THE GREATEST MARKET PENETRATION?

APPLE	8,269	46.7	36,781	54.8
RADIO SHACK	4,392	24.8	14,113	21.0
COMMODORE	2,645	14.9	9,166	13.7
OTHER (INCLUDING ATARI, TI, IBM & FRANKLIN)	2,389	13.5	7,011	10.5

NOTE: SHARED BRANDS ARE DOUBLE-COUNTED (E.G. A SCHOOL WITH BOTH APPLE & ATARI IS COUNTED TWICE)

WHICH BRANDS OF MICROCOMPUTERS ARE USED IN U.S. PUBLIC SCHOOLS ENTERING FALL, 1983

BRAND	1983-84	1982-83	1981-82
APPLE	36,781	15,773	3,989
RADIO SHACK	14,113	7,054	1,849
COMMODORE	9,166	3,740	642
ATARI	2,216	712	(INCL. IN "OTHER")
TEXAS INSTRUMENTS	1,732	77	(INCL. IN "OTHER")
IBM	1,244	(INCL. IN "OTHER")	(")
FRANKLIN	943	(INCL. IN "OTHER")	(")
OTHER BRANDS	876	518	209
BRAND UNKNOWN	942	5,995	7,023
TOTAL SCHOOLS	68,013	33,932	14,132
(UNDUP.) SCHOOLS	55,175	(30,859)	

WHAT SHIFTS ARE THERE IN USE OF DIFFERENT BRANDS OF MICROS?

	APPLE			RADIO SHACK			COMMODORE		
	82	83	84	82	83	84	82	83	84
PERCENTAGE OF SCHOOL DISTRICTS	21%	42%	46%	9%	22%	25%	2%	9%	15%
SCHOOLS	28%	47%	54%	13%	21%	21%	5%	11%	14%

WHICH HARDWARE MANUFACTURER HAS THE GREATEST MARKET PENETRATION?

	APPLE			RADIO SHACK			COMMODORE		
	82	83	84	82	83	84	82	83	84
PERCENTAGE OF SCHOOL DISTRICTS	61%	55%	47%	26%	29%	25%	6%	12%	15%
SCHOOLS	56%	57%	55%	26%	25%	21%	9%	13%	14%

WHAT KIND OF DISTRICT HAS MICROS?

- THE LARGER THE STUDENT ENROLLMENT THE MORE LIKELY THE DISTRICT IS TO HAVE MICROS

NO. STUDENTS	NO. DISTRICTS WITH MICROS			TOTAL DISTRICTS			% WITH MICROS		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
25,000+	220	381	398	281	427	407	78.3	89.2	97.8
10,000-25,000	378	447	451	564	522	483	67.0	85.6	93.4
5,000-10,000	660	885	930	1,093	1,061	1,000	60.4	83.4	93.0
2,500-5,000	1,092	1,629	1,845	2,081	2,086	2,019	52.5	78.0	91.4
1,000-2,500	1,705	2,662	3,244	3,712	3,701	3,536	45.9	71.9	91.7
600-1,000	819	1,138	1,417	1,933	1,947	1,827	42.2	58.4	77.6
300-600	845	1,190	1,739	2,408	2,431	2,338	35.1	48.9	74.4
UNDER 300	629	1,047	2,028	4,374	4,336	5,018	14.4	24.1	40.4

* NUMBERS INCLUDE SUBDISTRICT UNITS OF LARGER DISTRICTS.

HOW DOES RELATIVE WEALTH/POVERTY OF THE COMMUNITY RELATE TO MICROCOMPUTERS?

PUBLIC SCHOOLS

RELATIVE WEALTH *	NO. WITH MICROCOMPUTERS			TOTAL			PERCENTAGE WITH MICROS		
OF SCHOOLS	1982	1983	1984	1982	1983	1984	1982	1983	1984
OVER 95%	3,604	7,754	8,266	11,819	11,398	11,186	30.5	68.0	73.9
90-95%	3,380	7,351	12,584	18,941	18,496	18,212	17.8	39.7	69.1
85-89%	2,367	4,838	9,348	14,714	14,368	14,206	16.1	33.7	65.8
75-84%	2,753	6,546	12,314	19,786	19,567	19,422	13.9	33.5	63.4
UNDER 75%	1,152	2,597	6,158	13,117	12,993	12,938	8.8	19.9	47.6
UNCLASSIFIED	876	1,773	2,505	7,370	6,826	6,987	11.9	25.9	35.8

THE WEALTHIER THE COMMUNITY, THE MORE LIKELY THE DISTRICT/SCHOOL IS TO HAVE MICROCOMPUTERS.

* RELATIVE WEALTH/POVERTY: CALCULATED DISTRICT - BY - DISTRICT BASED ON THE PERCENTAGE OF SCHOOL-AGE CHILDREN RISING ABOVE THE POVERTY GUIDELINE QUALIFIYING FOR CHAPTER ONE FUNDS.

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HOW DOES INSTRUCTIONAL DOLLARS PER PUPIL RELATE TO PRESENCE OF MICROCOMPUTERS?

SPENDING CATEGORY	NO. WITH MICROS			TOTAL			PERCENTAGE WITH MICROS		
DISTRICTS	1982	1983	1984	1982	1983	1984	1982	1983	1984
LOW-SPENDING	770	919	958	2,816	2,487	1,651	27.3	36.9	58.0
MEDIUM-SPENDING	3,525	5,067	6,072	9,538	9,012	8,082	36.9	56.2	75.1
HIGH-SPENDING	2,178	3,393	5,487	4,578	5,012	6,895	47.5	67.7	79.6
TOTAL	6,473	9,379	12,517	16,932	16,511	16,628	38.2	56.8	75.3
BUILDINGS									
LOW-SPENDING	841	1,572	3,232	8,308	6,752	8,538	10.1	23.2	44.9
MEDIUM-SPENDING	6,869	15,363	28,715	49,394	46,476	44,746	13.9	33.0	64.2
HIGH-SPENDING	6,422	13,924	22,628	28,045	30,420	29,668	22.9	45.7	76.3
TOTAL	14,132	30,859	55,175	85,747	83,648	82,952	16.5	36.8	66.5

* HIGHER-SPENDING DISTRICTS AND SCHOOLS ARE MORE LIKELY TO HAVE MICROCOMPUTERS

HIGH-SPENDING: $65.00+ MEDIUM-SPENDING: $35.00-64.99 LOW-SPENDING: UNDER $35.00

NOTE: THAT EXPENDITURE CATEGORIES HAVE SHIFTED. FOR COMPARABILITY QED IS DISPLAYING OLD RANGES. NEW RANGES ARE DISPLAYED IN QED's CATALOG AND IN OTHER CHARTS.

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WHAT KINDS OF SCHOOLS USE MICROS?

URBAN AND SUBURBAN SCHOOLS ARE MORE LIKELY TO HAVE MICROS: RURAL SCHOOLS ARE LESS LIKELY

SCHOOL TYPE	SCHOOLS WITH MICROS			TOTAL SCHOOLS			% WITH MICROS		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
SUBURBAN	6,184	14,156	23,893	34,159	33,457	32,891	18.1	42.3	72.6
URBAN	3,168	6,027	10,479	15,480	14,981	15,167	20.5	40.2	69.1
RURAL	4,759	10,622	20,757	35,982	35,077	34,891	13.2	30.2	59.5

LARGER SCHOOLS ARE MORE LIKELY TO HAVE MICROS. BUT SCHOOLS WITH 300+ STUDENTS ARE CATCHING UP.

SCHOOL SIZE	SCHOOLS WITH MICROS			TOTAL SCHOOLS			% WITH MICROS		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
1,500+	1,598	2,312	2,449	2,857	2,846	2,711	55.9	81.2	90.3
1,000-1,500	1,917	3,245	3,960	4,652	4,667	4,634	41.2	69.5	85.5
750-1,000	1,816	3,627	5,220	6,842	6,849	6,664	26.5	52.9	78.3
500-750	2,961	7,186	12,650	17,567	17,522	17,385	16.8	41.0	72.8
300-500	3,105	8,092	16,288	24,339	24,107	24,179	12.7	33.5	67.4
100-300	2,275	5,331	12,009	21,430	20,638	20,695	10.6	25.8	58.0
UNDER 100	460	1,066	2,599	8,060	7,019	6,684	5.7	15.1	38.9

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HOW DOES THE PERCENTAGE OF MINORITY STUDENTS RELATE TO PRESENCE OF MICROS?

MINORITY PERCENTAGE	NUMBER WITH MICROS			TOTAL			PERCENTAGE WITH MICROS		
DISTRICTS (BLACK)	1982	1983	1984	1982	1983	1984	1982	1983	1984
1-25%	1,454	2,224	2,803	3,440	3,433	3,429	41.8	64.7	81.7
26-50%	249	408	533	717	705	703	34.7	57.8	75.8
OVER 50%	142	212	319	474	466	466	29.9	45.4	68.4
DISTRICTS (HISPANIC)									
1-10%	1,205	1,803	2,123	2,696	2,656	2,654	44.7	67.8	80.1
11-20%	194	296	346	521	511	511	37.2	57.9	67.7
OVER 20%	280	469	580	936	923	922	29.9	50.8	62.9

DOES SCHOOL TYPE MAKE ANY DIFFERENCE IN RELATIONSHIP BETWEEN ENROLLMENT AND MICROS?

SCHOOL TYPE	STUDENT ENROLLMENT							
ELEMENTARY	UNDER 100	100-300	300-500	500-750	750-1,000	1,000-1,500	1,500+	TOTAL
WITH MICROS	1,695	8,369	12,119	7,505	1,832	526	67	32,113
TOTAL SCHOOLS	4,989	15,250	18,463	10,909	2,553	737	95	52,996
PERCENTAGE	33.9	54.8	65.6	68.7	71.7	71.3	70.5	60.5
JR. HIGH								
WITH MICROS	119	1,157	2,135	2,994	1,838	1,052	170	9,465
TOTAL SCHOOLS	257	1,960	3,086	3,885	2,300	1,233	189	12,910
PERCENTAGE	46.3	59.0	69.1	77.0	79.9	85.3	89.9	73.3
SR. HIGH								
WITH MICROS	785	2,483	2,034	2,151	1,550	2,382	2,212	13,597
TOTAL SCHOOLS	1,438	3,485	2,630	2,591	1,811	2,664	2,427	17,046
PERCENTAGE	54.5	71.2	77.3	83.0	85.5	89.4	91.1	79.7
TOTAL								
WITH MICROS	2,599	12,009	16,288	12,650	5,220	3,960	2,449	55,175
TOTAL SCHOOLS	6,684	20,695	24,179	17,385	6,664	4,634	2,711	82,952
PERCENTAGE	38.8	58.0	67.3	72.7	78.3	85.4	90.3	66.5

ACROSS ALL SCHOOL TYPES, STUDENT ENROLLMENT IS AN EXTEMELY STRONG PREDICTOR OF MICROS.

* SIMILARLY, STUDENT ENROLLMENT IS THE SINGLE STRONGEST PREDICTOR OF DISTRICT USE OF MICROS.

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HAS THE USAGE OF MICROCOMPUTERS EXPANDED AT THE ELEMENTARY SCHOOL LEVEL?

SCHOOLS	ELEM	JUNIOR HIGH	SENIOR HIGH
1982 WITH MICROS	5,142	2,441	6,403
1983 WITH MICROS	14,160	6,015	10,318
1982 % OF ALL	9.4	20.3	42.6
1983 % OF ALL	27.4	46.2	62.5
RATE OF INCREASE	175.4%	146.4%	61.1%

SCHOOLS	ELEM	JUNIOR HIGH	SENIOR HIGH
1983 WITH MICROS	14,160	6,015	10,318
1984 WITH MICROS	32,113	9,465	13,597
1983 % OF ALL	27.4	46.2	62.5
1984 % OF ALL	61.0	72.2	78.5
RATE OF INCREASE	126.7%	57.4%	31.8%

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IS ENROLLMENT OR EXPENDITURE A MORE VALID PREDICTOR OF PRESENCE OF MICROCOMPUTERS?

LOW SPENDING ALL	LOW SPENDING SMALL (UNDER 300)	LOW SPENDING LARGE (OVER 500)
53.6% WITH MICROS	39.8% WITH MICROS	66.4% WITH MICROS
8,450 WITH MICROS 15,767 TOTAL SCHOOLS	2,171 WITH MICROS 5,464 TOTAL SCHOOLS	4,180 WITH MICROS 6,299 TOTAL SCHOOLS
MEDIUM SPENDING ALL	**MEDIUM SPENDING SMALL (UNDER 300)**	**MEDIUM SPENDING LARGE (OVER 500)**
67.3% WITH MICROS	52.1% WITH MICROS	76.9% WITH MICROS
27,950 WITH MICROS 41,552 TOTAL SCHOOLS	7,305 WITH MICROS 14,028 TOTAL SCHOOLS	11,644 WITH MICROS 15,147 TOTAL SCHOOLS
HIGH SPENDING ALL	**HIGH SPENDING SMALL (UNDER 300)**	**HIGH SPENDING LARGE (OVER 500)**
73.3% WITH MICROS	59.8% WITH MICROS	81.1% WITH MICROS
18,775 WITH MICROS 25,633 TOTAL SCHOOLS	4,733 WITH MICROS 7,918 TOTAL SCHOOLS	8,067 WITH MICROS 9,948 TOTAL SCHOOLS
TOTAL PUBLIC	**TOTAL PUBLIC SMALL**	**TOTAL PUBLIC LARGE**
66.5%	56.0%	76.1%

- SAME NUMBERS ARE GENERALLY TRUE FOR ELEMENTARY AND SECONDARY, ALTHOUGH THE DIFFERENCE IS MORE DRAMATIC FOR SECONDARY SCHOOLS. SECONDARY SCHOOLS WITH 750+ ENROLLMENT ARE SIMILAR.

WHICH COMPUTER OWNERS ARE MORE LIKELY TO PURCHASE SOFTWARE?

IN EDUCATION, APPLE HAS A LARGER MARKET SHARE IN HIGHER SPENDING DISTRICTS.

BRAND	LOW SPENDING	MEDIUM SPENDING	HIGH SPENDING
APPLE	47.3% (56.5)	53.8% (65.4)	55.0% (71.4)
RADIO SHACK	25.9% (30.9)	22.8% (27.8)	17.7% (23.1)
COMMODORE	13.5% (16.0)	12.2% (14.8)	15.4% (20.4)
IBM	1.6% (1.9)	1.7% (1.7)	2.0% (2.0)

THIS COMPARISON REPRESENTS THE PERCENTAGE OF SCHOOLS WITHIN EXPENDITURE LEVEL THAT HAS MICROCOMPUTERS OF THE BRAND CITED COMPARED TO THE TOTAL NUMBER OF SCHOOLS WITH MICROCOMPUTERS IN THAT CATEGORY.

TAKING EACH BRAND AS A PERCENTAGE OF ALL SCHOOLS WITH MICROCOMPUTERS (UNDUPLICATED) YIELDS THE PERCENTAGES SHOWN IN PARENTHESES.

HAS THE SOFTWARE COORDINATION BECOME MORE CENTRALIZED IN SCHOOL DISTRICTS?

1981-82	1982-83	1983-84	INCREASE (DECREASE) 82-83	INCREASE (DECREASE) 83-84	CATEGORY QED 044
3,245	5,388	6,437	66%	19%	DISTRICT OFFICE
					QED 067
3,247	5,377	4,926	65%	(8%)	INDIVIDUAL SCHOOL (DISTRICT WIDE FUNCTION)

THE "MAVEN" COMPUTER EXPERT IN ONE SCHOOL APPEARED TO PEAK DURING THE 1982-83 SCHOOL YEAR.
THE TOTAL NUMBER OF SCHOOL PERSONNEL FUNCTIONING ON A DISTRICT WIDE BASIS IS DOWN FOR THE CURRENT 1983-84 SCHOOL YEAR.
THE TOTAL NUMBER OF DISTRICT WIDE SOFTWARE COORDINATORS HAS NOT INCREASED DRAMATICALLY, BUT REPRESENTS THIS SPECIFIC FUNCTION IN 78% OF DISTRICTS WITH MORE THAN 2,500 STUDENTS.

UNDER 1,000 STUDENTS	1,000-5,000	5,000+	FUNCTION
2,131	2,704	1,502	DISTRICT LEVEL SOFTWARE COORDINATORS
2,156	2,343	427	BUILDING LEVEL SOFTWARE COORDINATORS
7,914	5,554	1,624	NUMBER OF SCHOOL DISTRICTS WITH MICROS

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WHAT IS THE BREAKOUT OF NUMBER OF MICROCOMPUTERS BY BRAND IN SCHOOLS?

NUMBER OF UNITS OF MICROCOMPUTERS PER SCHOOL

BRAND	1 UNIT	2-5	6-10	11-20	20+ UNITS
APPLE	12,965	16,547	4,494	2,244	531
RADIO SHACK	4,129	6,186	2,217	1,283	298
COMMODORE	2,386	4,154	1,511	896	219
ATARI	678	1,086	245	186	21
T I	676	742	211	80	13
FRANKLIN	258	458	153	60	14
IBM	476	463	135	146	24

- NO REAL SURPRISES IN THE DISTRIBUTION OF UNITS BY BRAND

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FALL 1983 HOW MANY MICROCOMPUTERS BY BRAND ARE IN PUBLIC SCHOOLS?

BRAND	NO. UNITS	PERCENT OF TOTAL UNITS	RANK	PERCENT OF SCHOOLS
APPLE	153,719	51.3	1	54.1
RADIO SHACK	70,093	23.4	2	20.8
COMMODORE	47,888	15.9	3	13.5
ATARI	9,780	3.3	4	3.3
IBM	6,008	2.0	5	1.8
T I	5,747	1.9	6	2.6
FRANKLIN	4,337	2.5	7	1.4
OTHER	1,808	.6	8	2.7
TOTAL	299,380			

(NOTE THAT COUNTS BY STATE TOTAL 290,000 UNITS. COUNTS BY STATE TOTAL ACTUAL NUMBER OF UNITS REPORTED PER DISTRICT. THE COUNTS BY BRAND REPRESENT COUNTS TAKING THE MID POINT OF EACH UNIT RANGE FOR EACH BRAND AND, THEREFORE, MAY HAVE A SLIGHT ERROR.)

- NOTE THAT THE PERCENTAGE OF SCHOOLS USING EACH BRAND REPRESENTS VERY CLOSELY THE ACTUAL NUMBER OF UNITS OR TRUE MARKET PENETRATION, ENHANCING THE HISTORICAL DATA COLLECTED BY QUALITY EDUCATION DATA FOR THE 1981-82 AND 1982-83 SCHOOL YEARS.

HOW MANY SCHOOLS HAVE ENOUGH MICROCOMPUTERS TO SUPPORT NETWORKING?

SCHS WITH/ALL SCHOOLS MICROS	SCHS WITH/ALL SCHOOLS MICROS	SCHS WITH/ALL SCHOOLS MICROS
LOW SPENDING ALL	LOW SPENDING SMALL (UNDER 300)	LOW SPENDING LARGE (OVER 500)
25.6% 13.7%	11.2% 4.5%	36.4% 24.2%
2,161 WITH 6+ UNITS	244 WITH 6+ UNITS	1,523 WITH 6+ UNITS
8,450 WITH MICROS	2,171 WITH MICROS	4,180 WITH MICROS
15,767 TOTAL SCHOOLS	5,464 TOTAL SCHOOLS	6,299 TOTAL SCHOOLS
MEDIUM SPENDING ALL	MEDIUM SPENDING SMALL (UNDER 300)	MEDIUM SPENDING LARGE (OVER 500)
28.0% 18.9%	13.1% 6.8%	45.0% 34.6%
7,837 WITH 6+ UNITS	955 WITH 6+ UNITS	5,241 WITH 6+ UNITS
27,950 WITH MICROS	7,305 WITH MICROS	11,644 WITH MICROS
41,552 TOTAL SCHOOLS	14,028 TOTAL SCHOOLS	15,147 TOTAL SCHOOLS
HIGH SPENDING ALL	HIGH SPENDING SMALL (UNDER 300)	HIGH SPENDING LARGE (OVER 500)
31.5% 23.0%	16.3% 9.7%	48.6% 39.4%
5,911 WITH 6+ UNITS	771 WITH 6+ UNITS	3,918 WITH 6+ UNITS
18,775 WITH MICROS	4,733 WITH MICROS	8,067 WITH MICROS
25,633 TOTAL SCHOOLS	7,918 TOTAL SCHOOLS	9,948 TOTAL SCHOOLS
TOTAL PUBLIC	TOTAL PUBLIC SMALL	TOTAL PUBLIC LARGE
28.8% 19.2%	13.9% 7.2%	4.5% 34.0%
15,509 WITH 6+ UNITS	1,970 WITH 6+ UNITS	10,682 WITH 6+ UNITS
55,175 WITH MICROS	14,209 WITH MICROS	23,891 WITH MICROS
82,952 TOTAL SCHOOLS	27,410 TOTAL SCHOOLS	31,394 TOTAL SCHOOLS

HOW DO THE TOP 50 DISTRICTS LOOK IN USE OF MICROCOMPUTERS?

- TOP 50 DISTRICTS HAVE 6.25 MILLION STUDENTS
  9.3 THOUSAND SCHOOLS
  35.4 THOUSAND MICROCOMPUTERS
  4 MICROCOMPUTERS PER SCHOOL

JEFFERSON CO. COLO. HAS 15 MICROS PER SCHOOL.
HAWAII HAS LESS THAN ONE MICRO PER SCHOOL.

BRAND	NO. UNITS	NO. DISTRICTS
APPLE	15,879	43
RADIO SHACK	10,098	36
COMMODORE	3,464	30
ATARI	3,106	8
IBM	1,579	15
FRANKLIN	1,102	4
TX. INST.	952	7
OTHER	525	3
TOTAL	36,835	50

HOW DO STATES COMPARE IN THE NUMBER OF STUDENTS PER MICRO?

STATE	NUMBER OF STUDENTS	NO. UNITS	STUDENTS PER MICRO	STATE	NUMBER OF STUDENTS	NO. UNITS	STUDENTS PER MICRO
ALABAMA	725,002	2,488	291	MISSOURI	813,711	4,984	163
ALASKA	117,084	1,083	108	MONTANA	160,690	2,298	70
ARIZONA	508,282	4,077	125	NEBRASKA	272,052	2,624	104
ARKANSAS	444,751	3,065	145	NEVADA	150,588	1,013	149
CALIFORNIA	4,040,715	30,033	142	NEW HAMPSHIRE	161,756	1,239	131
COLORADO	555,005	5,605	99	NEW JERSEY	1,200,913	9,602	125
CONNECTICUT	494,502	3,731	133	NEW MEXICO	263,166	1,875	140
DELAWARE	91,682	657	140	NEW YORK	2,722,965	20,262	134
DIST. COLUMBIA	92,000	700	131	N. CAROLINA	1,124,854	5,020	224
FLORIDA	1,513,642	13,803	110	N. DAKOTA	116,417	932	125
GEORGIA	1,043,052	4,128	253	OHIO	1,870,080	10,565	177
HAWAII	167,209	156	1,072	OKLAHOMA	598,312	5,394	111
IDAHO	202,101	1,459	139	OREGON	458,528	4,011	114
ILLINOIS	1,890,799	14,058	134	PENNSYLVANIA	1,771,071	11,429	155
INDIANA	1,006,173	8,860	114	RHODE ISLAND	139,965	894	157
IOWA	515,569	5,377	96	S. CAROLINA	602,424	2,423	249
KANSAS	411,897	4,287	96	S. DAKOTA	125,660	2,025	62
KENTUCKY	654,940	3,623	181	TENNESSEE	844,199	4,082	207
LOUISIANNA	785,580	2,718	289	TEXAS	2,938,255	20,246	145
MAINE	213,923	1,559	137	UTAH	364,042	3,700	98
MARYLAND	690,728	3,508	197	VERMONT	95,710	1,237	77
MASSACHUSETTS	897,907	8,204	109	VIRGINIA	1,013,127	6,487	156
MICHIGAN	1,682,331	15,017	112	WASHINGTON	731,778	7,045	104
MINNESOTA	726,980	11,513	63	W. VIRGINIA	385,014	2,159	178
MISSISSIPPI	465,561	1,306	356	WISCONSIN	803,714	7,291	110
				WYOMING	100,203	1,041	96

TOTAL MICRO UNITS BY STATE: 290,888

QED's ELEMENTARY/SECONDARY SURVEY OF PUBLIC SCHOOLS
NUMBER OF MICROCOMPUTER UNITS BY STATE - FALL 1983

STATE	ELECTRONIC LEARNING	QED NO. UNITS	STATE	ELECTRONIC LEARNING	QED NO. UNITS
ALABAMA	1,000	2,488	MISSOURI	_____	4,984
ALASKA	1,750	1,083	MONTANA	1,746 + 747 PLANNED	2,298
ARIZONA	1,054 (69%)	4,077	NEBRASKA	1,708 (2,200 EST.)	2,624
ARKANSAS	1,569 (96%)	3,065	NEVADA	_____	1,013
CALIFORNIA	(10,000 KIDS CAN'T WAIT)	30,028	NEW HAMPSHIRE	1,200 EST.	1,239
COLORADO	5,000 (80%)	5,605	NEW JERSEY	_____	9,602
CONNECTICUT	4,000 ('82)	3,731	NEW MEXICO	301	1,875
DELAWARE	1,080 ('82)	657	NEW YORK	25,000 EST.	20,262
DIST.COLUMBIA	1,414 (9/83)	700	N. CAROLINA	6,000	5,020
FLORIDA	8,000 ('82)	13,803	N. DAKOTA	_____	932
GEORGIA	1,213	4,128	OHIO	6,827 (54% DISTS)	10,565
HAWAII	155	156	OKLAHOMA	4,000 EST.	5,394
IDAHO	_____	1,459	OREGON	1,500	4,011
ILLINOIS	(81-82 42% DISTS)	14,058	PENNSYLVANIA	(15,000 BY 84-85)	11,429
INDIANA	1 1/2 PROGS/DIST.	8,860	RHODE ISLAND	700 (11/82)	894
IOWA	2,782 (82)	5,377	S. CAROLINA	_____	2,423
KANSAS	3,259	4,287	S. DAKOTA	1,300 (86% '82)	2,025
KENTUCKY	2,000 EST. ('82)	3,023	TENNESSEE	1,000+ (12/82)	4,082
LOUISIANNA	1,373 (INCL. AMP)	2,718	TEXAS	_____	20,246
MAINE	950 ('82)	1,559	UTAH	1,818 (89% ENR 12/3)	3,700
MARYLAND	SEVERAL 1,000 ('82)	3,508	VERMONT	950 (50%)	1,237
MASSACHUSETTS	9,500 EST.	8,204	VIRGINIA	1,600 (3/2)	6,487
MICHIGAN	_____	15,017	WASHINGTON	_____	7,045
MINNESOTA	12,800	11,513	W. VIRGINIA	1,352 (5/83)	2,159
MISSISSIPPI	1,260 EST.	1,306	WISCONSIN	6,525+ 1,003 ORDERED	7,291
			WYOMING	1,000 EST.	1,041

QED: TOTAL MICRO UNITS BY STATE: 290,888

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HOW WILL CHAPTER 2 FEDERAL FUNDS BE SPENT IN 1983-84 SCHOOL YEAR?

ITEM	PRIORITY (PERCENTAGE OF SCHOOL DISTRICTS PER REGION)								
	New England	Mid-West	Southeast	Great Lakes	Plains	Southwest	Rocky Mtns.	Far West	Total
1. BOOKS, MATERIALS	55%	49%	74%	48%	46%	75%	45%	54%	56%
2. COMPUTER HARDWARE	66%	63%	37%	66%	53%	22%	47%	50%	50%
3. COMPUTER SOFTWARE	43%	47%	26%	43%	31%	18%	15%	41%	34%
4. A V EQUIPMENT	18%	15%	33%	29%	23%	25%	24%	18%	25%
5. STAFF TRAINING	43%	19%	20%	18%	11%	18%	19%	17%	19%

SOURCE: SURVEY OF SCHOOL DISTRICTS BY AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS
PUBLISHED IN AUGUST 1983 COMPUTERWISE, NATIONAL SCHOOL BOARDS ASSOC. COMPUTER ALLIANCE

WHAT INFORMATION HAS QED GATHERED ON THE USE OF VIDEO FOR INSTRUCTION IN SCHOOLS?

- CALLED EVERY SCHOOL DISTRICT
  - ASKED IF VIDEO WERE USED FOR CLASSROOM INSTRUCTION
  - IF YES, ASKED FORMAT OF VIDEO EQUIPMENT BEING USED (VHS, BETA OR 3/4 INCH)
  - IF YES, ASKED NAME OF VIDEO COORDINATOR FOR THE DISTRICT
- ASKED USE OF VIDEO FOR EACH SCHOOL IN THE DISTRICT
  - IF YES, THE FORMAT USED (VHS, BETA OR 3/4 INCH)

SUMMARY:	1983	1984	INCREASE
	6,601	9,657	46.3% DISTRICTS USING VIDEO FOR INSTRUCTION
	25,663	36,544	54.3% SCHOOLS USING VIDEO FOR INSTRUCTION
	4,320	4,941	14.4% DISTRICT COORDINATORS

AS NEWSWEEK INDICATED, 1983-84 MAY BE THE "YEAR OF VIDEO". THE DISTRIBUTION IN NUMBERS LOOKS LIKE MICROCOMPUTER INSTRUCTIONAL PENETRATION LAST YEAR (30,000+ SCHOOLS WITH MICROS LAST YEAR, WITH SENIOR HIGHS OUT IN FRONT.

ODD FACTS:
6 DISTRICTS HAVE VIDEO, BUT NO MICROS.
3,449 DISTRICTS HAVE MICROS BUT NO VIDEO.

VIDEO USERS BY FORMAT AND GRADE SPAN

WHAT VIDEO INFORMATION QED HAS GATHERED

FORMAT	# SCHOOL DISTRICTS W/VIDEO		# SCHOOL BUILDINGS W/VIDEO	
	1983	1984	1983	1984
YES (UNKNOWN MIXTURE)	4,984	6,749	16,616	19,785
VHS	935	1,927	5,246	10,566
BETA	496	707	2,097	3,180
3/4"	186	274	1,704	3,014
TOTAL	6,601	9,657	25,663	36,545

FORMAT	ELEMENTARY		JR. HIGH		SR. HIGH		OTHER		TOTALS	
	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984
YES (UNKNOWN MIXTURE)	8,391	10,178	3,116	3,454	4,575	5,509	532	644	16,614	19,782
VHS	2,754	5,987	1,109	1,957	1,170	2,138	213	484	5,246	10,566
BETA	999	1,591	433	633	596	833	68	123	2,096	3,180
3/4"	973	1,789	304	524	341	511	89	190	1,707	3,014
TOTAL WITH VIDEO	13,117	19,545	4,962	6,568	6,682	8,991	902	1,441	25,663	36,545
TOTAL SCHOOLS	51,684	51,075	13,037	12,914	16,514	14,418	2,423	4,545	83,648	82,903
% OF TOTAL	25.4%	38.3%	38.1%	50.9%	40.5%	62.4%	37.2%	31.7%	30.7%	44.1%